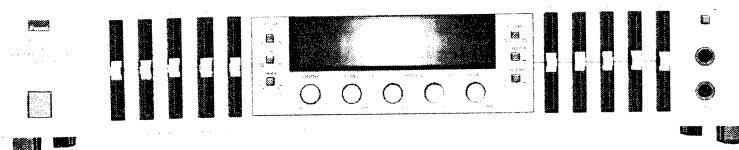


# SERVICE MANUAL

## STEREO GRAPHIC EQUALIZER CONSOLETTTE

### SANSUI RG-7X (Silver & Black Model)



#### •SPECIFICATIONS

##### Input sensitivity and Impedance (1 kHz)

SOURCE IN, TAPE PLAY .....	150 mV/47 kilohms
(Max. input capability; 8V, 20 Hz to 20 kHz)	
MIC.....	0.5 mV/10 kilohms
(Max. input capability; 25 mV, 100 Hz to 15 kHz)	
GUITAR .....	5 mV/100 kilohms

##### Output level and impedance (1 kHz)

TAPE REC .....	150 mV/1 kilohms
PREAMP OUT.....	150 mV/1 kilohms

##### Total harmonic distortion (1V, 20 Hz to 20 kHz)

SOURCE IN, TAPE PLAY .....	0.05%
----------------------------	-------

##### Frequency response (0.5V)

SOURCE IN, TAPE PLAY .....	20 Hz to 20 kHz, +0 dB, -0.5 dB
----------------------------	------------------------------------

##### Signal to noise ratio (Short-circuit, A-network)

SOURCE IN, TAPE PLAY .....	75 dB
----------------------------	-------

##### Channel separation (1 kHz)

SOURCE IN, TAPE PLAY .....	70 dB
----------------------------	-------

##### Echo time .....

0 ~ 3 sec. (-60 dB)	
---------------------	--

##### Duet time.....

25 msec and 50 msec.	
----------------------	--

##### Others

Power voltage .....	110 ~ 120/220 ~ 240V (50/60 Hz)
---------------------	------------------------------------

For U.S.A and Canada .....

120V (60 Hz)	
--------------	--

##### Power consumption .....

20 watts	
----------	--

##### Dimensions .....

430 mm (16-15/16") W	
----------------------	--

87 mm (3-7/16") H	
-------------------	--

228 mm (9") D	
---------------	--

##### Weight .....

3.3 kg (7.3 lbs.) net	
-----------------------	--

3.9 kg (8.6 lbs.)	
-------------------	--

packed	
--------	--

\* Design and specifications subject to change without notice for improvements.

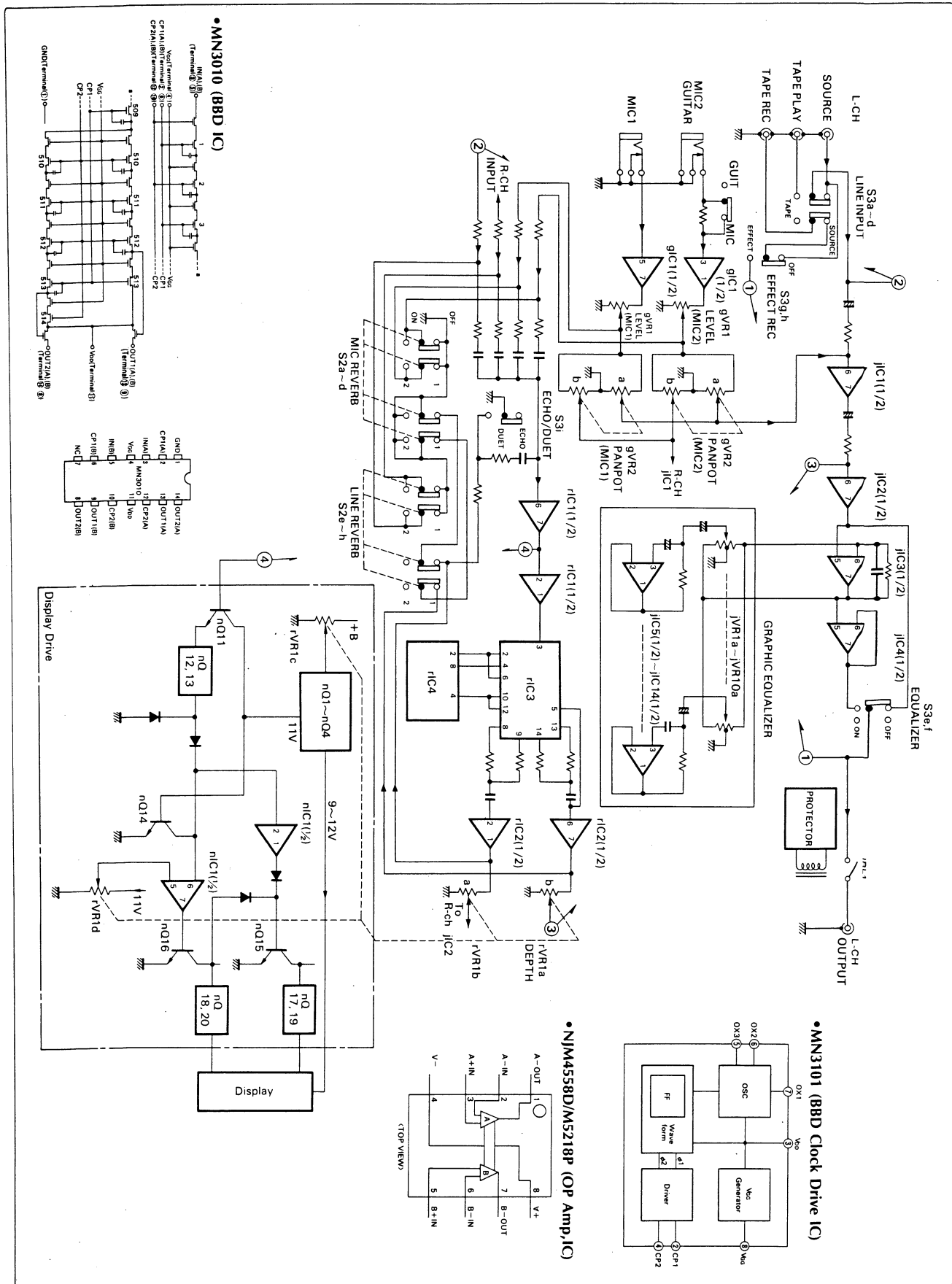
#### CAUTION

1. Use only replacement parts recommended by the manufacturer.
2. Measure insulation resistance before returning the appliance to the customer to prevent electrical shock.



SANSUI ELECTRIC CO., LTD.

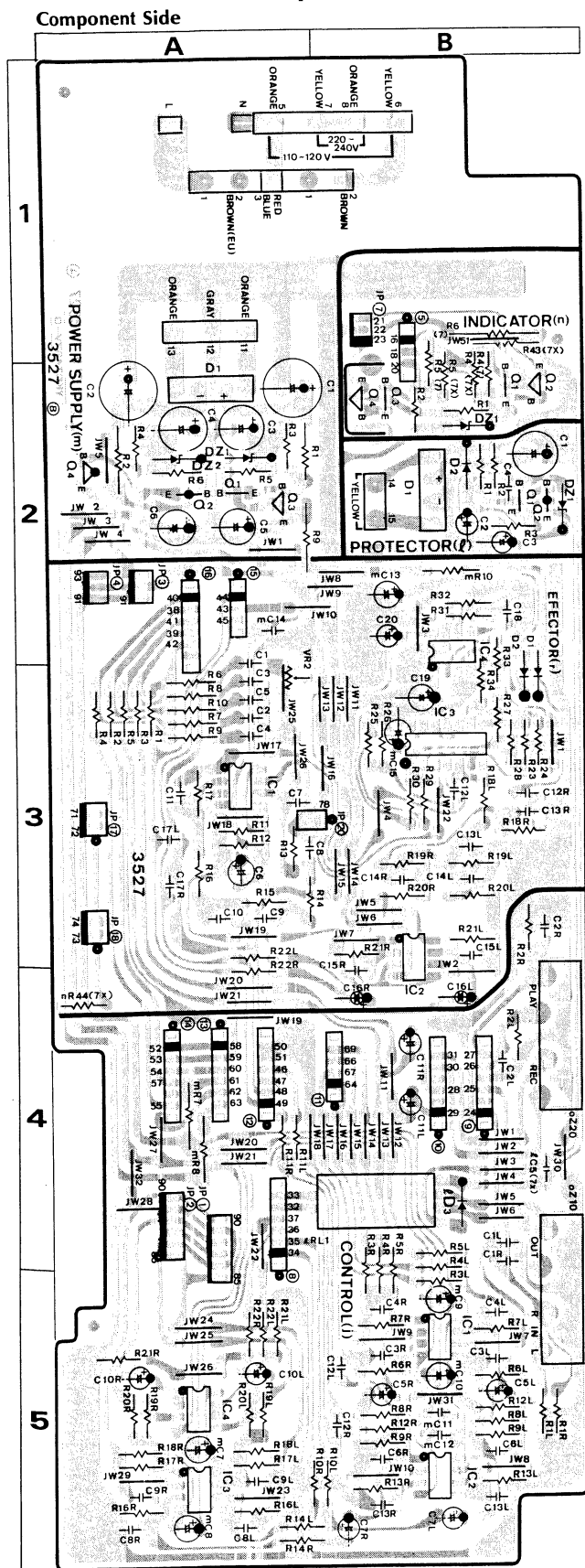
## 1. BLOCK DIAGRAM



## 2. PARTS LOCATION & PARTS LIST

### 2-1. F-3527 Control Amp. Circuit Board (Stock No. 00748201)

•Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

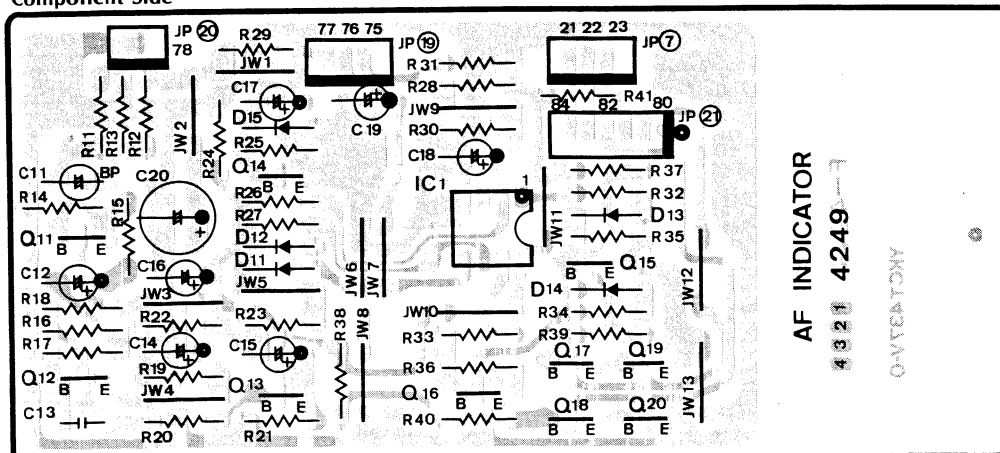


#### Parts List

Parts No.	Stock No.	Description
•IC		
iIC1	03607700	NJM4558D
	or 46580100	M5218P
iIC2	03607700	NJM4558D
	or 46580100	M5218P
iIC3	03607700	NJM4558D
	or 46580100	M5218P
iIC4	03607700	NJM4558D
	or 46580100	M5218P
•Transistor		
IQ1	07194801	2SC1815
IQ2	07194701	2SA1015
•Diode		
ID1	03117000	RB-152
ID2	03117600	1S2473T77
	or 46086000	1S1588TP
ID3	03117700	10E-2
•Zener Diode		
IDZ1	46112100	05Z6 8-Y
	or 46112200	05Z6 8-Z
IRL1	11504700	Relay
	or 11504701	Relay
•Transistor		
mQ1	07194801	2SC1815
mQ2	07194701	2SA1015
mQ3	03086101	2SD357
	or 03083901	2SD313
mQ4	03034401	2S8527
	or 03032301	2S8507
•Diode		
mD1	03117000	RB-152
mDZ1	03179400	RD16E-B
	or 46114800	05Z16-Y
mDZ2	03179400	RD16E-B
	or 46114800	05Z16-Y
•Transistor		
nQ1	07194801	2SC1815
nQ2	03083901	2SD313
nQ3	07194801	2SC1815
nQ4	03083901	2SD313
•Zener Diode		
nDZ1	46114200	05Z13-Y
	07249100	4P Input Terminal Board
	07249100	4P Input Terminal Board
•IC		
rIC1	03607700	NJM4558D
	or 46580100	M5218P
rIC2	03607700	NJM4558D
	or 46580100	M5218P
rIC3	46080200	MN3010
rIC4	46080300	MN3101
•Diode		
rD1	03117600	1S2473T77
rD2	03117600	1S2473T77
rVR2	10351900	100kΩ(B) S.V.R., Echo level adj

## 2-2. F-4249 Reverberation Indicator Control Circuit Board (Stock No. 00747901)

Component Side



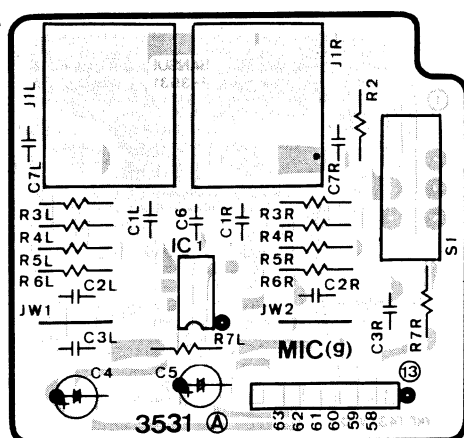
### Parts List

Parts No.	Stock No.	Description
•Transistor		
nQ11	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ12	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ13	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ14	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ15	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ16	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ17	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785

Parts No.	Stock No.	Description
nQ18	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ19	46543501	2SC3243
nQ20	46543501	2SC3243
•IC		
nIC1	46580100	M5218P
	or 03607700	NJM4558D
•Diode		
nD11	46086000	1S1588TP
	or 03117600	1S2473T77
nD12	46086000	1S1588TP
	or 03117600	1S2473T77
nD13	46086000	1S1588TP
	or 03117600	1S2473T77
nD14	46086000	1S1588TP
	or 03117600	1S2473T77
nD15	46086000	1S1588TP
	or 03117600	1S2473T77
nC11	08451700	1μF 50V E.B.

## 2-3. F-3531 Mic Amp. Circuit Board (Stock No. 00748601)

Component Side



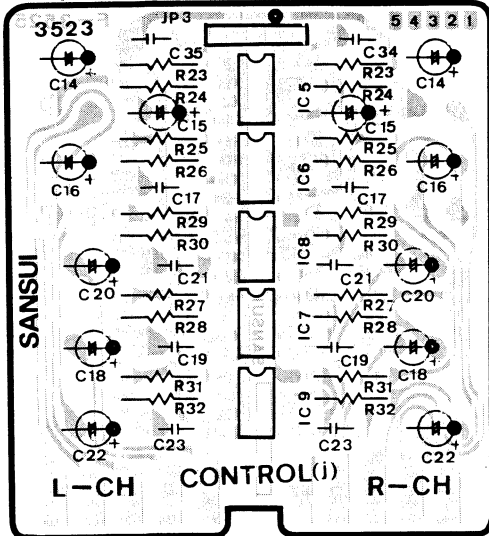
### Parts List

Parts No.	Stock No.	Description
•IC		
gIC1	07208900	NJM4558D-X
oS1	46612100	Push SW., MIC/GUITAR
oJ1	46085000	Jack, MIC

## 2-4. F-3523 Low Range Filter Amp.

Circuit Board (Stock No. 00748001)

Component Side



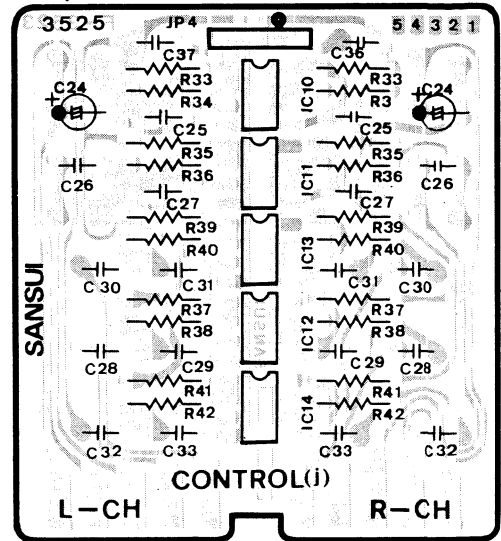
### Parts List

Parts No.	Stock No.	Description
•IC		
jIC5	03607700	NJM4558D
	or 46580100	M5218P
jIC6	03607700	NJM4558D
	or 46580100	M5218P
jIC7	03607700	NJM4558D
	or 46580100	M5218P
jIC8	03607700	NJM4558D
	or 46580100	M5218P
jIC9	03607700	NJM4558D
	or 46580100	M5218P

## 2-5. F-3525 High Range Filter Amp.

Circuit Board (Stock No. 00748101)

Component Side



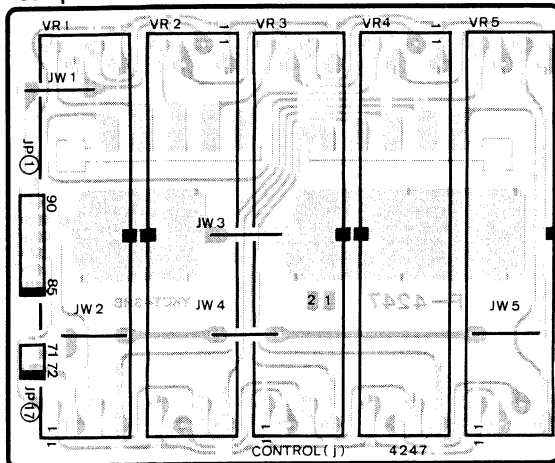
### Parts List

Parts No.	Stock No.	Description
•IC		
jIC10	03607700	NJM4558D
	or 46580100	M5218P
jIC11	03607700	NJM4558D
	or 46580100	M5218P
jIC12	03607700	NJM4558D
	or 46580100	M5218P
jIC13	03607700	NJM4558D
	or 46580100	M5218P
jIC14	03607700	NJM4558D
	or 46580100	M5218P

•Note: The circuit boards, F-4247, F-4248, F-3532, F-3528, F-3529 & F-3530 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

## 2-6. F-4247 Low Range Volume Circuit Board

Component Side

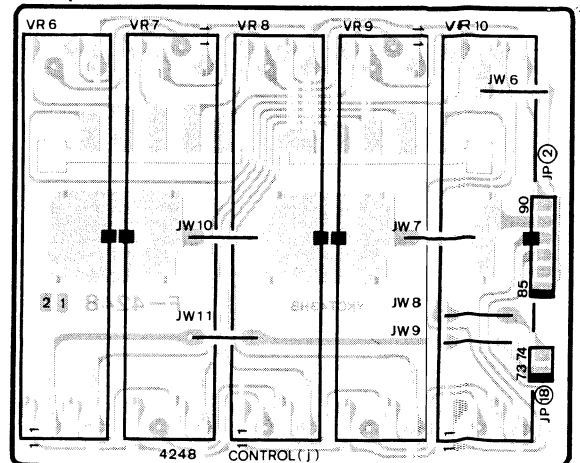


### Parts List

Parts No.	Stock No.	Description
jVR1	46612400	250kΩ × 2 Slide V.R., 30 Hz
jVR2	46612400	250kΩ × 2 Slide V.R., 60 Hz
jVR3	46612400	250kΩ × 2 Slide V.R., 125 Hz
jVR4	46612400	250kΩ × 2 Slide V.R., 250 Hz
jVR5	46612400	250kΩ × 2 Slide V.R., 500 Hz

## 2-7. F-4248 High Range Volume Circuit Board

Component Side

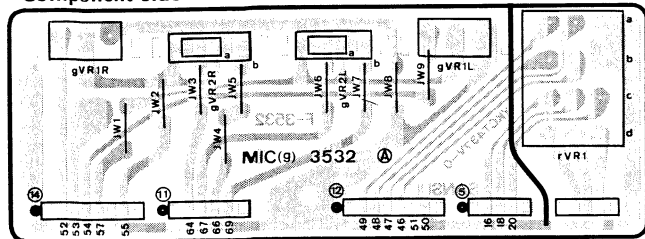


### Parts List

Parts No.	Stock No.	Description
jVR6	46612400	250kΩ × 2 Slide V.R., 1 kHz
jVR7	46612400	250kΩ × 2 Slide V.R., 2 kHz
jVR8	46612400	250kΩ × 2 Slide V.R., 4 kHz
jVR9	46612400	250kΩ × 2 Slide V.R., 8 kHz
jVR10	46612400	250kΩ × 2 Slide V.R., 16 kHz

## 2-8. F-3532 Mic & Reverberation Control Volume Circuit Board

Component Side

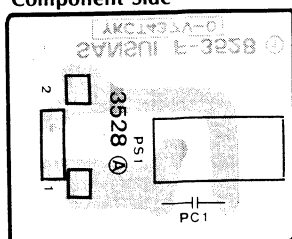


### Parts List

Parts No.	Stock No.	Description
rVR1	46097700	100k $\Omega$ (B) $\times$ 4 V.R., DEPTH
gVR1L	46097600	20k $\Omega$ (A) V.R., LEVEL-CH1
gVR1R	46097600	20k $\Omega$ (A) V.R., LEVEL-CH2
gVR2L	46097500	250k $\Omega$ (MN) V.R., PANPOT-CH1
gVR2R	46097500	250k $\Omega$ (MN) V.R., PANPOT-CH2

## 2-9. F-3528 POWER Switch Circuit Board

Component Side

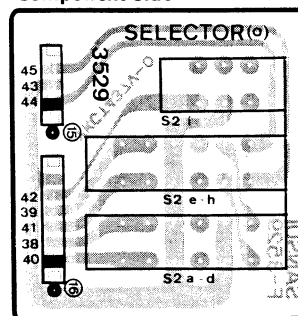


### Parts List

Parts No.	Stock No.	Description
pC1	46425800	10000pF 400V C.C.
pS1	46360400	Push SW., POWER

## 2-10. F-3529 REVERB-LINE/-MIC/-MODE Switch Circuit Board

Component Side

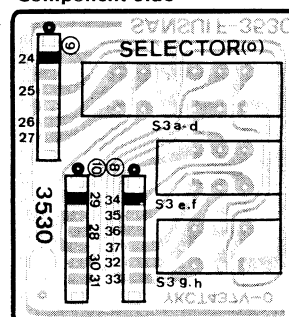


### Parts List

Parts No.	Stock No.	Description
oS2	46612300	Push SW.

## 2-11. F-3530 LINE INPUT/EQUALIZER/EFFECT REC Circuit Board

Component Side



### Parts List

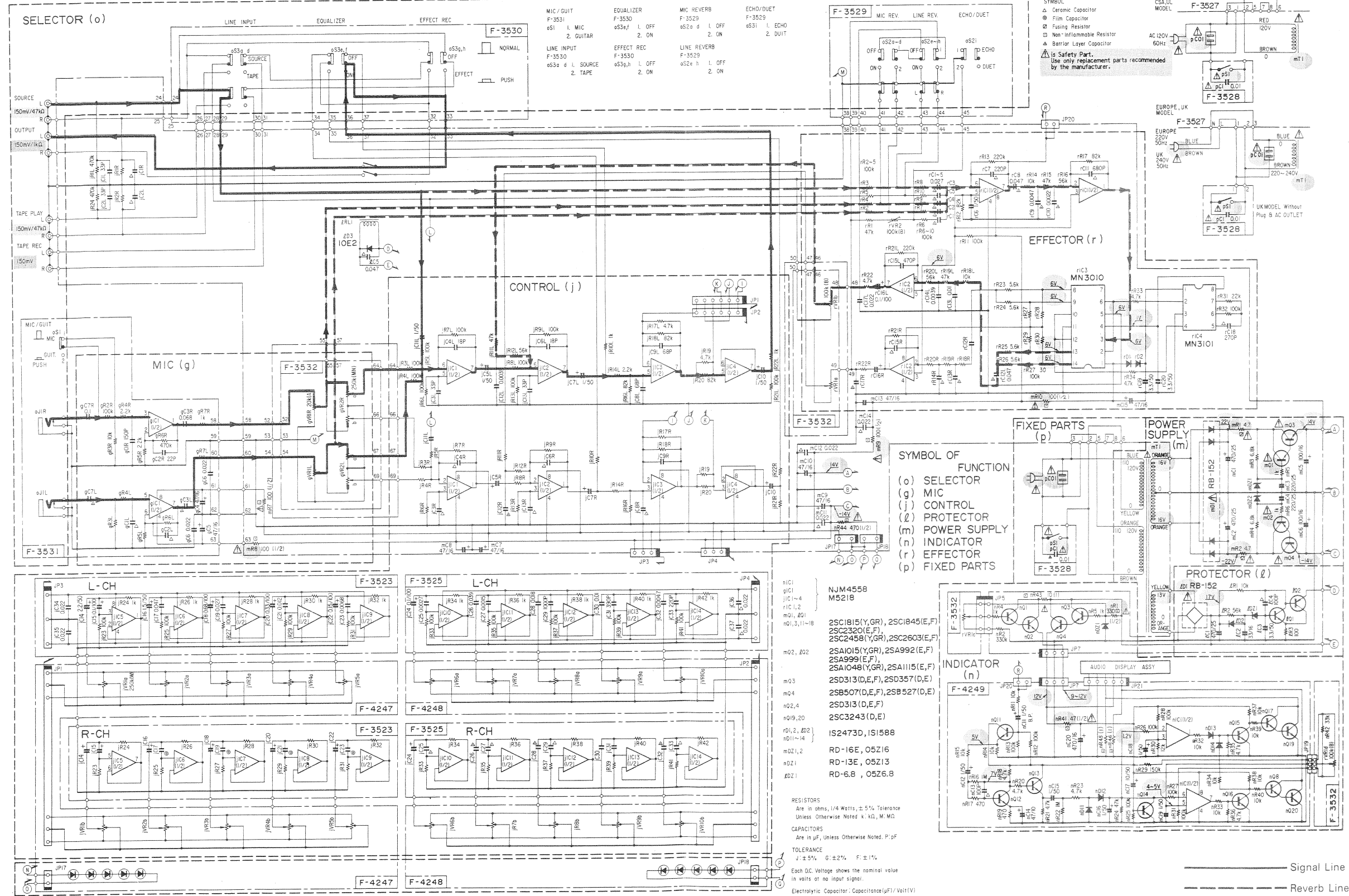
Parts No.	Stock No.	Description
oS3	46612200	Push SW.

### •Abbreviations

C.R. : Carbon Resistor	E.B. : Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor
Ce.R. : Cement Resistor	Ta.C. : Tantalum Capacitor
M.R. : Metal Film Resistor	F.C. : Film Capacitor
F.R. : Fusing Resistor	M.P. : Metalized Paper Capacitor
N.I.R. : Non-Inflammable Resistor	P.C. : Polystyrene Capacitor
C.C. : Ceramic Capacitor	G.C. : Gimmic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation	V.R. : Variable Resistor
E.C. : Electrolytic Capacitor	S.V.R. : Semi Variable Resistor
E.L. : Low Leak Electrolytic Capacitor	SW. : Switch

# 3. SCHEMATIC DIAGRAM

\*Design and specifications subject to change without notice for improvement.  
 \*La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 \*Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SYMBOL OF FUNCTION  
 (o) SELECTOR  
 (g) MIC  
 (j) CONTROL  
 (l) PROTECTOR  
 (m) POWER SUPPLY  
 (n) INDICATOR  
 (r) EFFECTOR  
 (p) FIXED PARTS

RESISTORS  
 Are in ohms, 1/4 Watts,  $\pm 5\%$  Tolerance  
 Unless Otherwise Noted: k, M,  $\mu$   
 CAPACITORS  
 Are in  $\mu$ F, Unless Otherwise Noted: p, pF  
 TOLERANCE  
 J:  $\pm 5\%$  G:  $\pm 2\%$  F:  $\pm 1\%$   
 Each DC Voltage shows the nominal value  
 in volts or no input signal.  
 Electrolytic Capacitor: Capacitance ( $\mu$ F) / Volt (V)

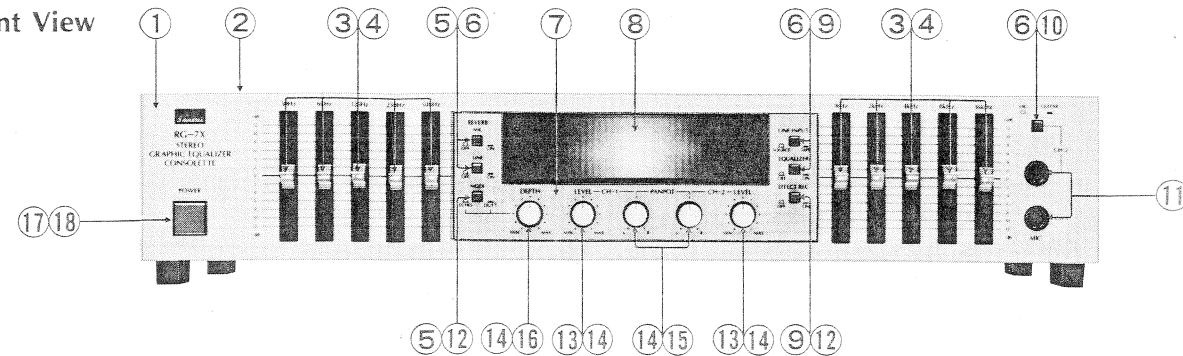
— Signal Line  
 - - - Reverb Line

- 2SA1015
- 2SC1815
- 2SC3243
- 2SB527
- 2SB507
- 2SD313
- 2SC2785
- 2SC2458
- 2SC2603
- M5218P
- MN3101
- NJM4558D
- MN3010
- RB152
- 1S2473D
- 05Z13-V
- 1S1588TP
- 05Z16-V
- RD-16E

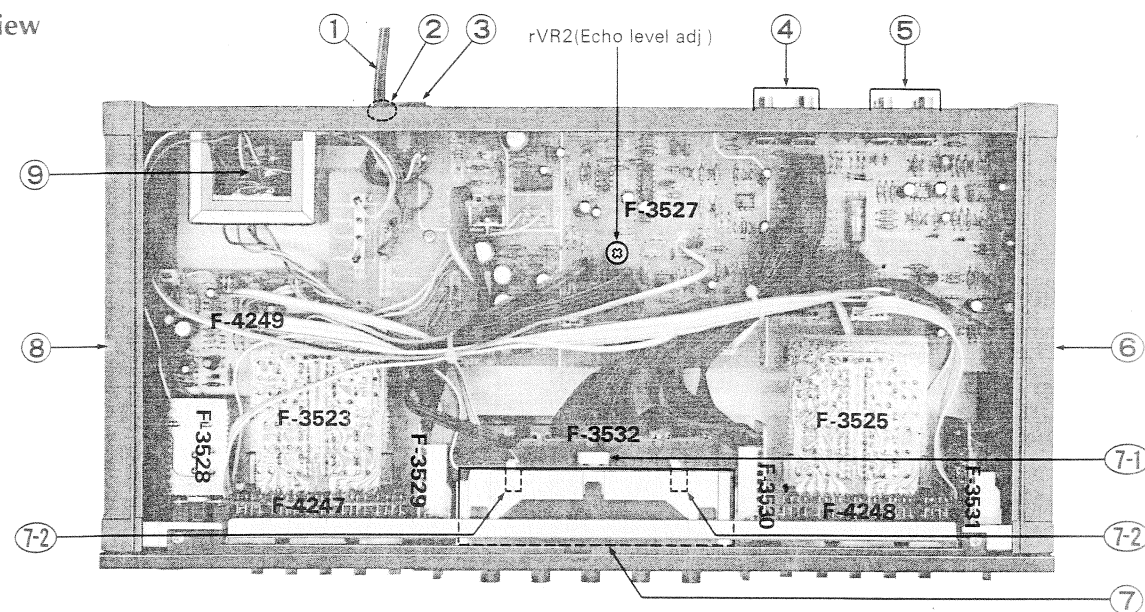
1  
2  
3  
4  
5

## 4. OTHER PARTS

### 4-1. Front View



### 4-2. Top View



#### Parts List < Front View >

Parts No.	Stock No.	Description
< Silver & Black Model >		
2	07601400	Bonnet
3	46612400	250kΩ x 2 Slide V.R., Equalizer level
5	46612300	Push SW., REVERB-LINE/-MIC/-MODE
8	07764300	Indicator Window
9	46612200	Push SW., LINE INPUT/EQUALIZER/EFFECT REC
10	46612100	Push SW., CH-2 MIC/GUITAR
11	46085000	Jack, MIC
13	46097600	20kΩ (A) V.R., CH-1, 2 LEVEL
15	46097500	250kΩ (MN) V.R., CH-1, 2 PANPOT
16	46097700	100kΩ (B) x 4 V.R., REVERB-DEPTH
17	46360400	Push SW., POWER
< Silver Model >		
1	47210100	Front Panel Ass'y
4	47211000	Slide Knob, Equalizer level
6	07580100	Push Knob, LINE INPUT etc.,
7	47211500	Sub Panel Ass'y
12	47221100	Push Knob, EFFECT REC/REVERB-MODE
14	07764500	Knob, CH-1, 2 LEVEL/PANPOT
18	47210600	Push Knob, POWER
< Black Model >		
1	47210200	Front Panel Ass'y
4	47211100	Slide Knob, Equalizer level

Parts No.	Stock No.	Description
6	07580200	Push Knob, LINE INPUT etc.,
7	47221200	Sub Panel Ass'y
12	47221100	Push Knob, EFFECT REC/REVERB-MODE
14	07764600	Knob, CH-1, 2 LEVEL/PANPOT
18	47210700	Push Knob, POWER

#### Parts List < Top View >

Parts No.	Stock No.	Description
1	38004700	Power Supply Cord
2	39106000	Strain Relief
3	07189600	AC Outlet
4	07249100	4P Input Terminal, TAPE
5	07249100	4P Input Terminal, SOURCE IN/PREAMP OUT
6	07601810	Side Panel (Right)
7	46607600	Indicator Box Ass'y
7-1	46133000	Main Indicator Lamp with Socket
7-2	46132900	Sub Indicator Lamp
8	07601710	Side Panel (Left)
9	15004201	Power Transformer

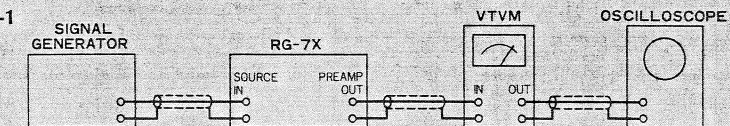
## 5. ECHO LEVEL ADJUSTMENT (See Top View)

SETTING: 1) Connect the measurement units as Fig. 5-1.

2) Set the control knobs as follows.

REVERB-MIC .....	OFF	REVERB-LINE .....	ON
REVERB-MODE .....	ECHO	REVERB-DEPTH .....	Max.
CH1/CH2 LEVEL .....	Min.	CH1/CH2 PANPOT .....	Center
LINE INPUT .....	SOURCE	EQUALIZER .....	OFF

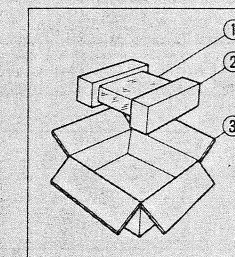
Fig. 5-1



INPUT SIGNAL	MEASURE OUTPUT	STEP	ADJUSTMENT
800 Hz 1.5V SG SOURCE IN	PREAMP OUT VTVM, Scope	1	Turn the semi-variable resistor rVR2 (F-3527) fully clockwise.
		2	Push LINE INPUT switch to set to TAPE position.
		3	Confirm that the reverberation circuit starts to oscillate, and its wave form comes out from PREAMP OUT.
		4	Turn rVR2 slowly counterclockwise until the oscillation stops.

## 6. PACKING LIST

Parts No.	Stock No.	Description
1	07599500	Vinyl Cover
2	07661900	Styrofoam Packing
3	47209900	Carton Case (Silver Model)
	47210000	Carton Case (Black Model)



## 7. ACCESSORY LIST

Stock No.	Description
46606600	Operating Instruction
38103300	PJP Cord



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(SM1-90)

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